CNS Performance

- Portmapper

- Lookup Throughput

- Refreshing

What is Portmapper?

- Allows client RPC applications to find the port of a server.
- UDP based.
- Services include:
  - → NFS
  - → NIS
  - → CNS

Portmapper & CNS

- Portmap query is issued per CNS client connection.

- ~5 delays can occur when CNS is running on Linux.

Portmapper & CNS

acnlin25

Query / Second	Delay / # Queries
~50	1 / 1,000
~80	1 / 100

acnsun68

Query / Second	Delay / # Queries
~50	< 1 / 10,000
~80	< 1 / 10,000

Current State

- No portmapper statistics available.

- No immediate solutions.

- Primary CNS currently running on SUN.

?

Lookup Throughput
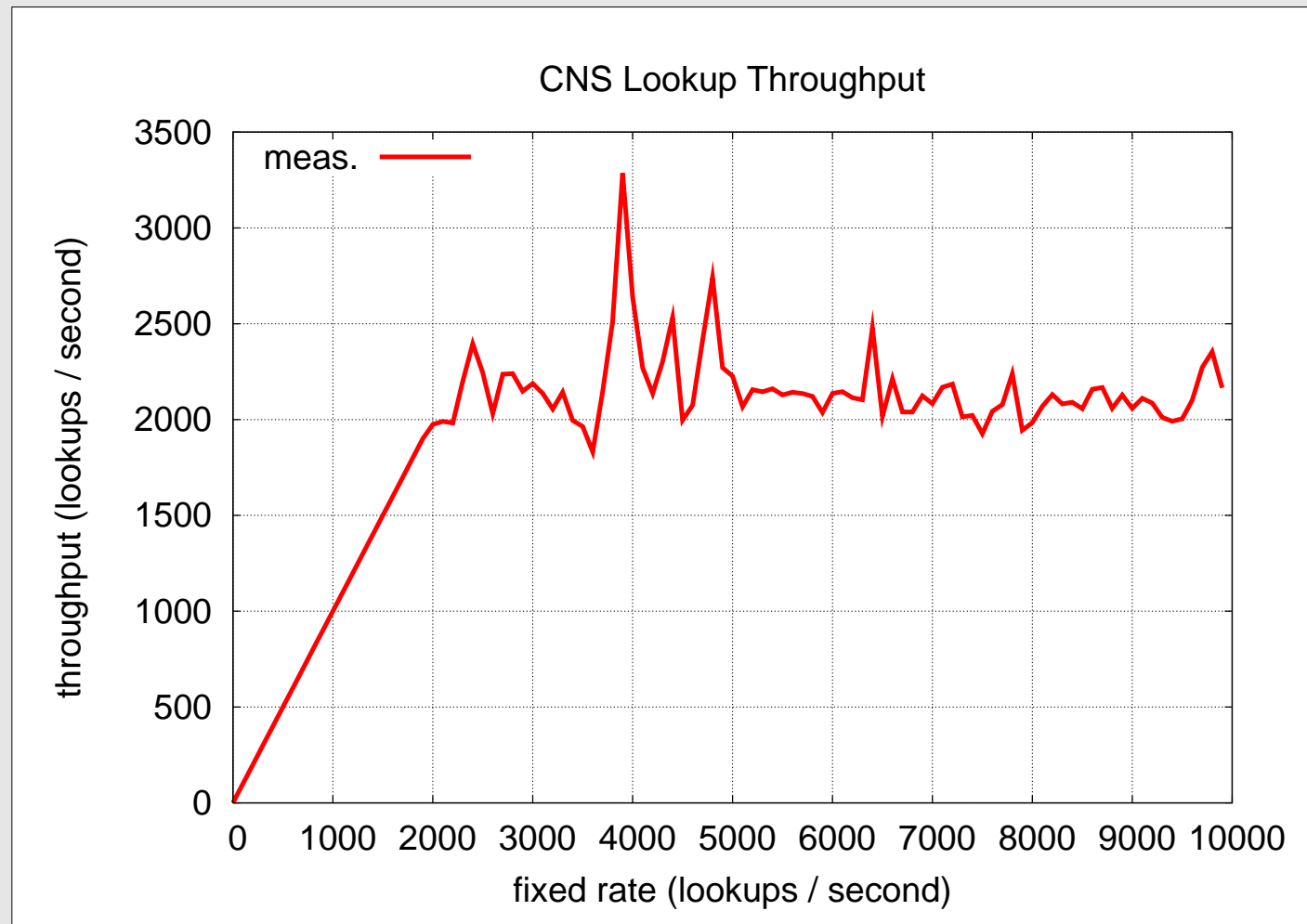
Can CNS handle operational load?

| Month	Avg. Lookups / Sec.	Stand. Dev.	Peak
March	184.0	55.0	732.3
April	196.4	32.0	1361.6

Lookup Benchmark

- Compare lookup rates of CNS to operational statistics.

- How the test works:
  - ➜ CNS is running on host A
  - ➜ Client is running on host B
  - ➜ Client attempts a fixed lookup rate of n / seconds.
  - ➜ Actual rate is measured on the client.

Host	CPU	Role
acnsun78	4 x 450 MHz Sparc	CNS
acnlin87	4 x 2.6 GHz Xeon	client

Lookup Benchmark
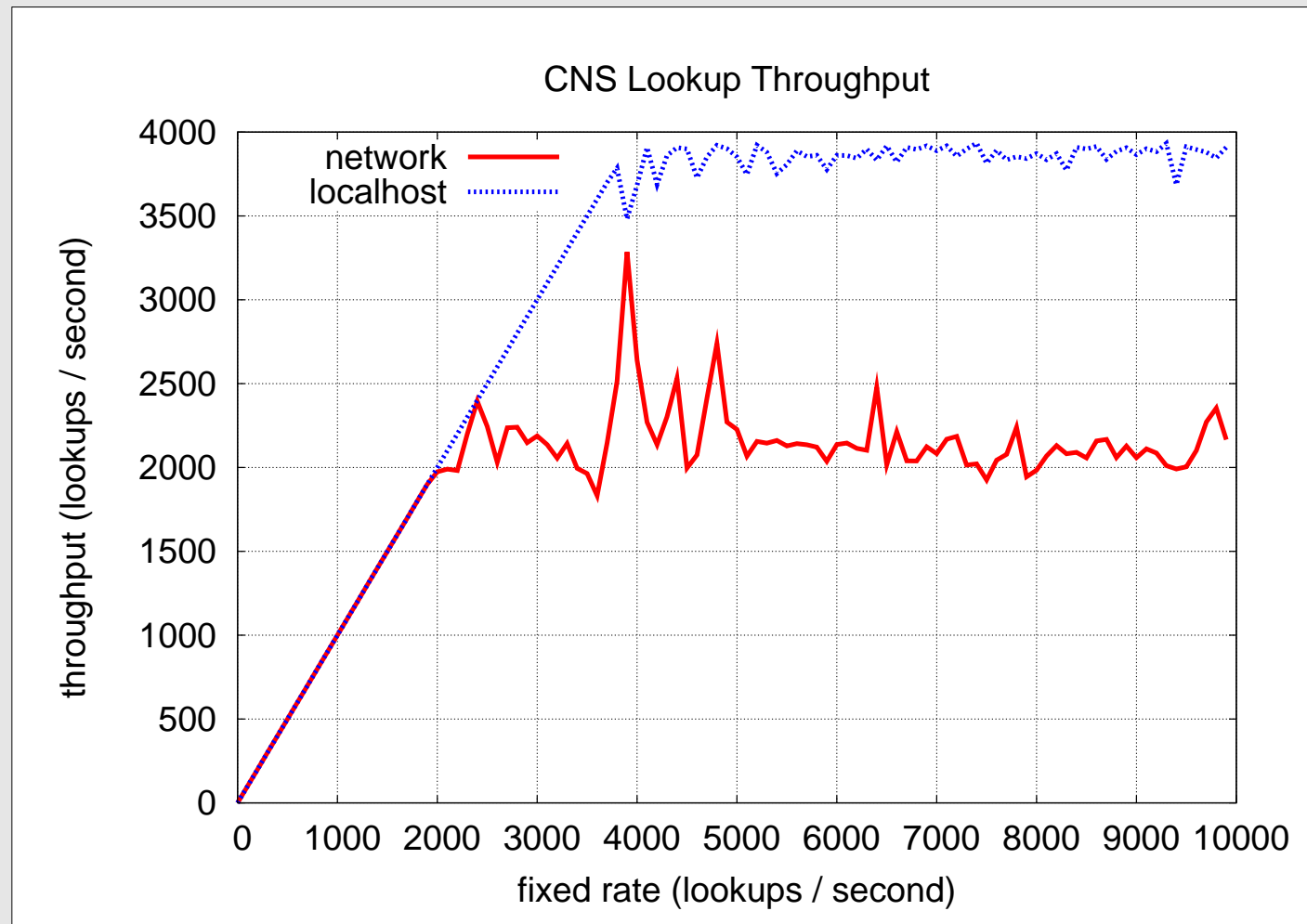

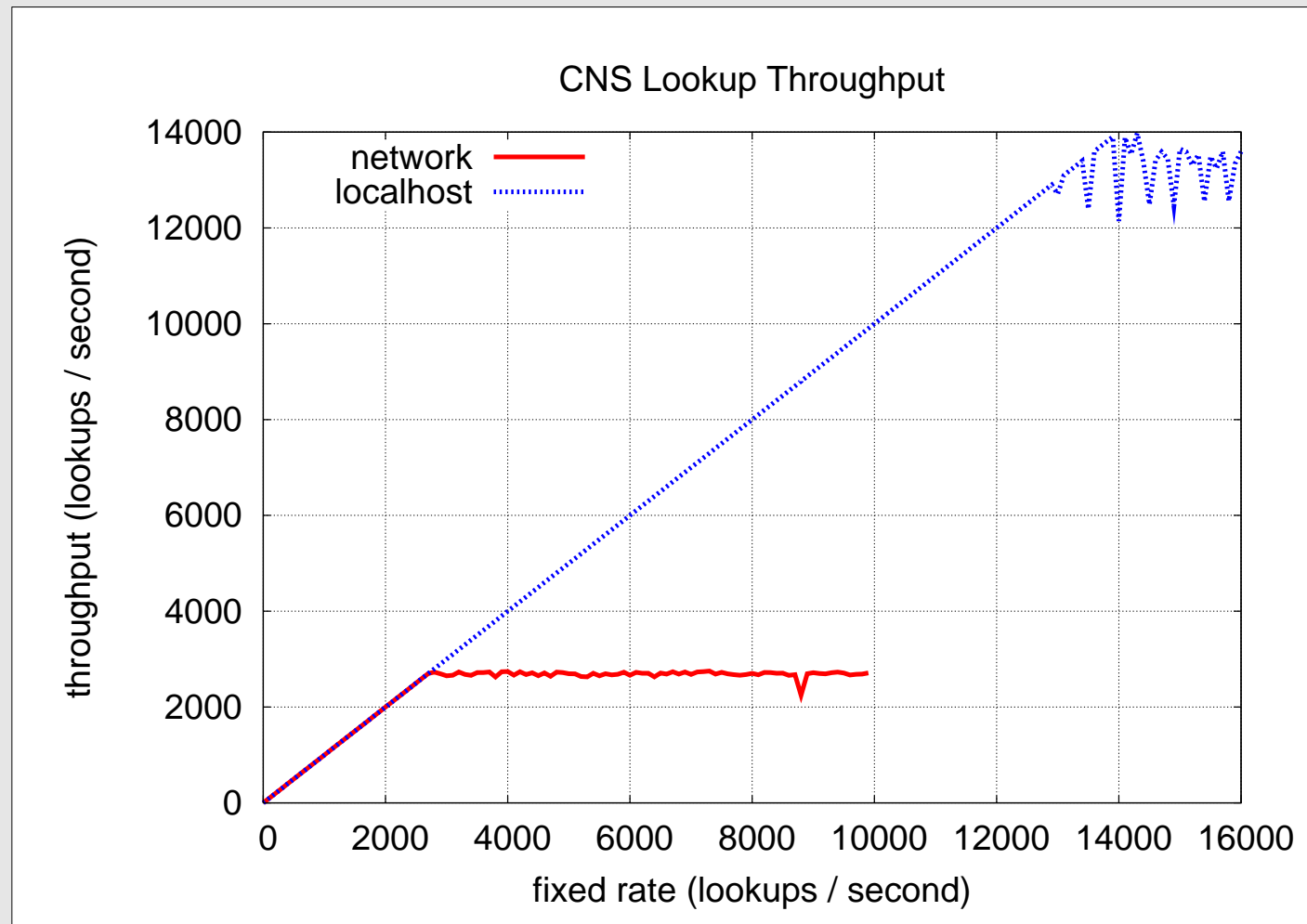CNS Lookup Throughput

Lookup Benchmark

Lookup Benchmark

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CNS Lookup Throughput
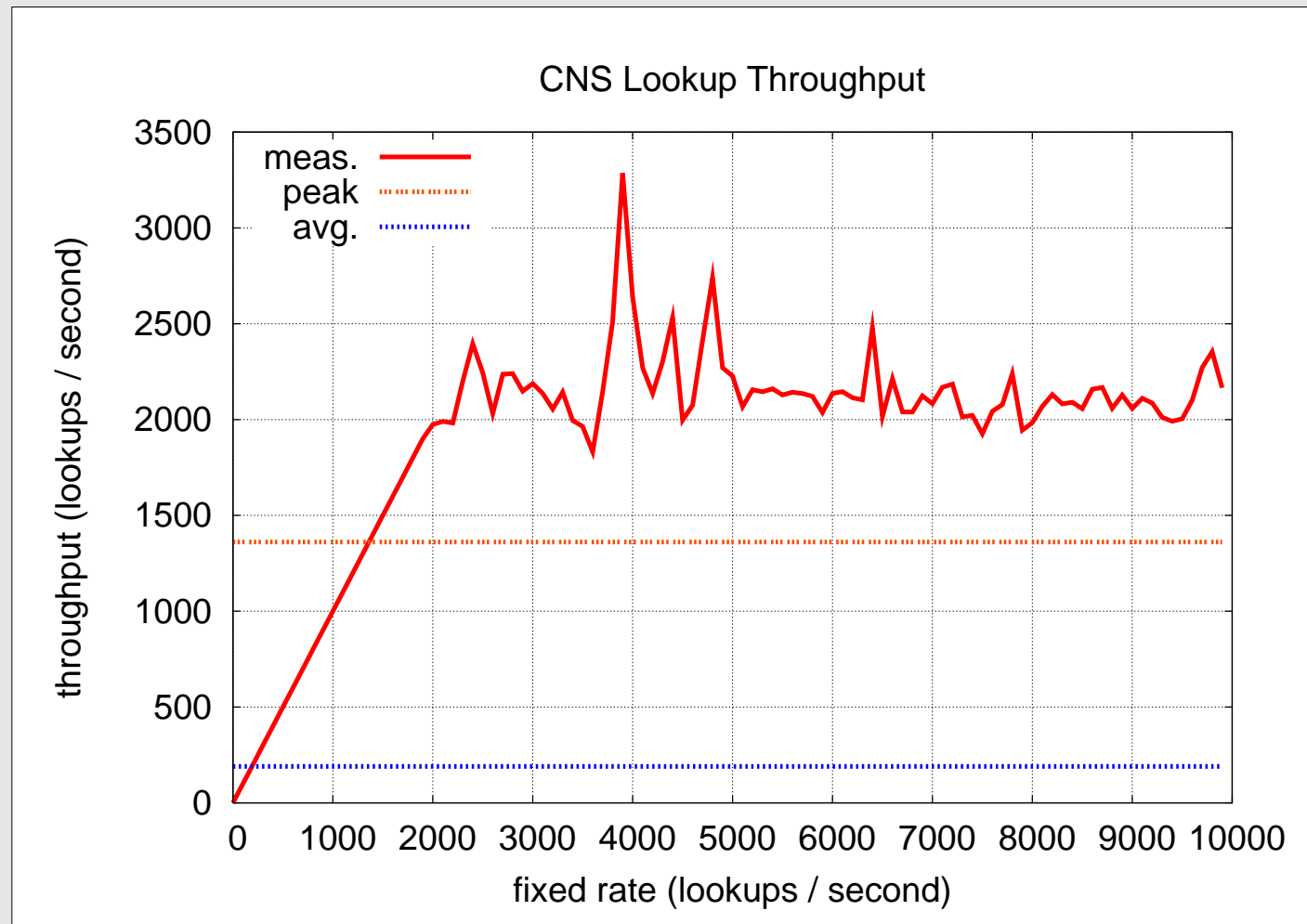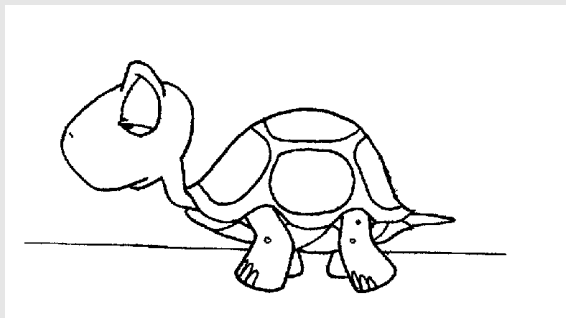
Current State

Can CNS handle operational load?

Yes!

CNS Refresh

How long can refresh occupy CNS?

CNS Refresh

How long can refresh occupy CNS?

Hostname	Avg. Time (sec.)	Stand. Dev.
acnlin25	5.93	0.30
† acnsun78	20.33	1.00

† similar/same to the current operational CNS server

Current State

- CNS handles refresh in a separate thread.

- Latency on main thread < 1 second.

- Change in refresh command semantics i.e. returns immediately.

- New script "cnsrefresh2" handles refresh and checks status.